



Electric Power in Austria

Population: 8.6 million (2015 est)
 GDP: \$374.2 billion (2015 est)
 GDP per capita: \$43,711 (2015 est)
 Currency: Euro
 Language: German



Generation	2013	2014
Gross Generation (TWh)	68	65.1
Of which hydro	67.2%	68.6%
Of which coal/oil der.	10%	8.7%
Of which gas	9.7%	7.4%
Of which biomass/gas	6.8%	5%
Of which wind/PV/Geothermal	5.1%	6.6%
Other generation	1.2%	3.6%
Final Consumption (TWh)	69.9	68.7

Generation Park	2014	
Energy source	Units	MW Capacity
Hydro	2,923	13,568
Thermal (gas)	59	4,889
Thermal (coal/oil derivate)	21	1,919
Thermal (bio)	474	628
Wind	442	2,110
PV	50,949	586
Total	54,889	24,224

Transmission/Distribution network	2014
Delivery Points	5.9 million
Length of grid	257,468 km
Percent underground	68.9%
Electrical Substations	1,081
Transformer Stations	77,447

Drivers

- Promote renewable resources/reduce CO² emissions
- Maintain/increase energy independence
- Keep prices competitive
- Improve internal market mechanisms (unbundling)
- Rejection of nuclear energy

Challenges for utilities

- Strong NIMBY movement stalling the buildout of high voltage lines
- Maintaining stability of the grid with renewables high in the mix
- Worries about cyber security, data privacy in smarter grids
- Progress slow on electricity storage solutions technologies
- How to finance reserve capacity, especially in a low price scenario
- In 2011, natural gas accounted for over 18% of total power generation. By 2014, it had fallen to under 8%. State-of-the-art gas-fired power plants currently sit idle several months of the year because their operation costs are higher than the income generated from the electricity they can sell.

Renewables targets

Austria's binding National Action Plan (NAP) requires 34% of gross energy consumption to come from renewable resources by 2020. To this end, alternative electricity generation was incentivized, district heating systems went up and a biological component was added to automobile fuel. In 2014, Austria already reported 33% renewables in the mix. By 2020, Austria aims to have 2,578 MWp wind on line, up from 2,110 in 2014. They have already passed their PV target by nearly 300%. Electricity generation itself fell by 4% in 2014, due largely to low import prices; only subsidized renewables showed significant growth.

Opportunities

High voltage lines

Electricity providers and policymakers agree that the high voltage network in Austria needs to be expanded. Electricity providers plan to add 200 km to the 380 KV and 550 km to the 200 KV networks by 2020 in order to accommodate increased EU electricity trading and the transfer and storage of renewable electricity output across Europe. The "master plan" for the expansion of high voltage lines calls for the construction of upgrades valued at over \$7.7 billion.

Smart grids and smart meters

Smart grids: The most important upgrades to the distribution system are being precipitated by the need to integrate volatile decentralized power generation into the electricity mix and the desire to postpone or avoid expensive new construction. Innovative data-driven services aimed both at customers and utilities are slowly gaining traction.

Smart meters: Regulation was passed in 2012 which requires that 95% of all household and small commercial customers have a smart meter installed by 2019, and 75% be covered by 2017. Estimated cost is \$11.2 billion.

Smart cities

Smart Cities: Currently 66% of the population lives in cities or urban regions, 81% use the internet frequently, 86% use smartphones on a regular basis, and 79% of households have access to broadband. Austria is a European frontrunner in developing smart cities initiatives, financing or co-financing activities in seven model regions for e-mobility, 104 climate and energy model regions, 21 smart cities, five smart urban regions and one smart grids model region.

Storage solutions

Austria has significant capacity of pumped storage (over 7 TW or 14% of European capacity is in Austria), the difficulty of moving electricity across the country however limits the value of these natural batteries. Furthermore, low electricity prices make the large necessary investment to build further plants uneconomical. Smaller, more modular distributed storage solutions that are both technically and economically feasible would be warmly welcomed by Austrian utilities.

Prepared by:
Marta Haustein
U.S. Commercial Service, Austria
Marta.Haustein@trade.gov